

# Pertussis Surveillance

## August 2018

### August Key Points



39 cases



1 outbreak



Average of 2 contacts per case



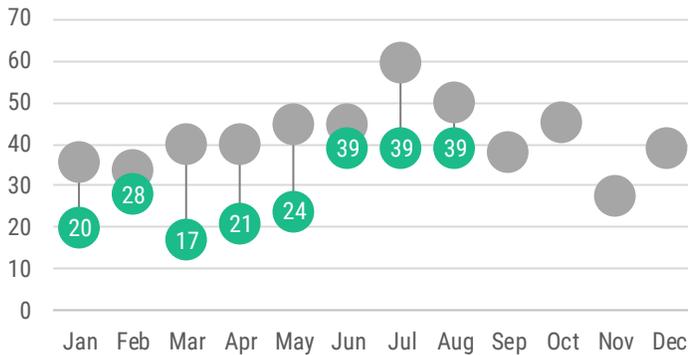
<1 year olds have highest incidence



44% cases never/under vaccinated

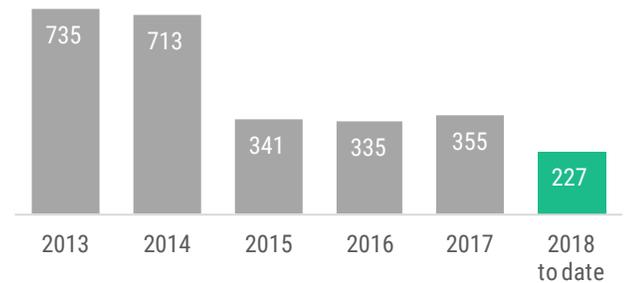
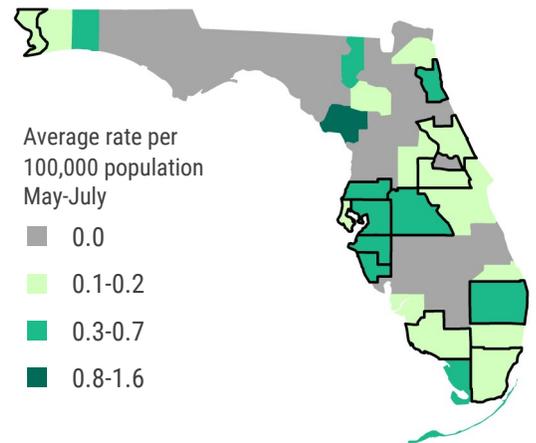


The number of pertussis cases reported in August was the same as the previous 2 months and remained below the previous 5-year-average. In general, more pertussis cases are reported during the summer months.



From January 1, 2018 through August 31, 2018, 227 pertussis cases were reported in 32 counties. Since 2014, the annual number of reported pertussis cases has decreased. Pertussis is cyclic in nature with peaks in disease every 3-5 years. Pertussis cases last peaked between 2013 and 2014. Thus far in 2018, it appears case counts will remain consistent with those seen during non-peak years.

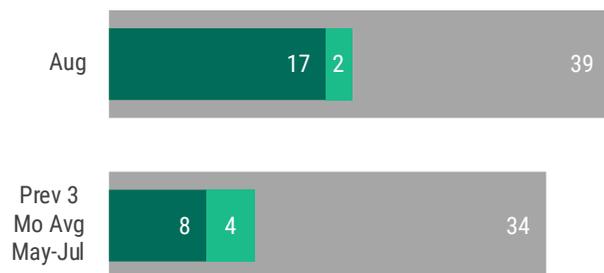
The 39 pertussis cases in August were reported among the 14 counties outlined in black. During the previous 3 months (May through July), the average county rate has varied throughout the state.



In August, 17 (44%) of 39 total cases were associated with transmission within households and 2 (5%) cases were outbreak-associated. For most pertussis cases, exposure to other known cases is never identified, and they are not able to be linked to outbreaks.

One pertussis outbreak was reported in August. The outbreak consisted of 2 cases in a child daycare.

Including the August outbreak, there have been 7 pertussis outbreaks reported in 2018. Outbreak settings include school (3 outbreaks), daycare (2 outbreaks), work place (1 outbreak), and extended family (1 outbreak).



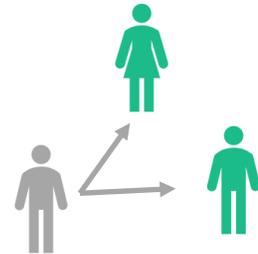
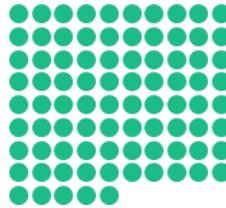


For each case reported in August, there was an average of 2 contacts for whom antibiotics were recommended to prevent illness. For those diagnosed with pertussis, antibiotics can shorten the amount of time they are contagious to others. Antibiotics can also be used to prevent illness in those who have been exposed to someone with pertussis while they are contagious.

39 cases



85 contacts



In August, the incidence rate was highest among infants <1 year old at 4 cases per 100,000 population, which is consistent with previous months. Infants experience the greatest burden of pertussis infections, not only in number of cases but also in severity. Infants <2 months old are too young to receive vaccinations against pertussis, which is why vaccination of grandparents, parents, siblings, and other age groups is so important to help prevent infection in infants.



**Vaccination is the best way to prevent pertussis infections.** In August, more than half of individuals reported with pertussis had not received the recommended number of pertussis vaccinations for their age or had unknown vaccination status. Although individuals who have been vaccinated can still get pertussis, **complete and timely vaccination remains the best way to prevent pertussis and severe complications.**

Too young for vaccination | Never vaccinated | Under vaccinated | Up-to-date on vaccinations | Unknown vaccination status

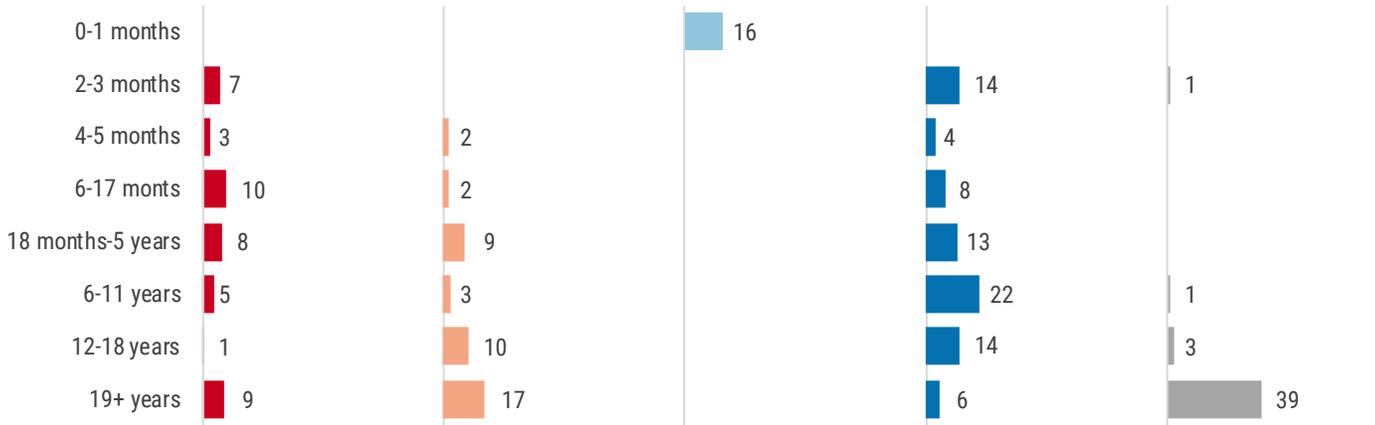


In August, 13% of cases were too young for vaccination. Vaccination against pertussis is important for infants, children, teenagers, and adults. Pregnant women should get vaccinated during the third trimester of each pregnancy to protect their babies.

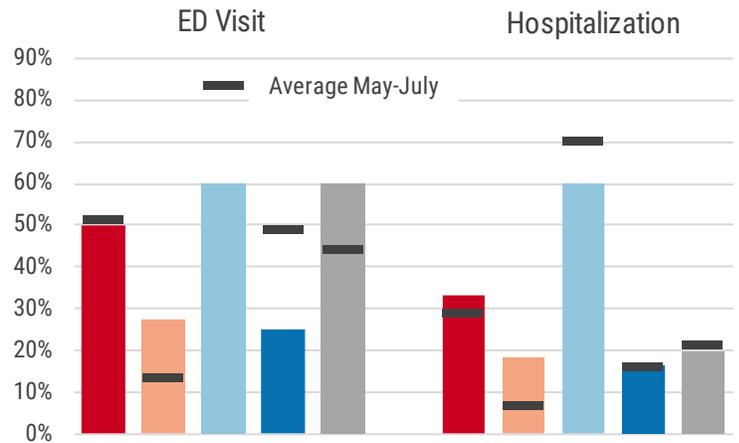


Over half of infants and children aged 6 months to 5 years were not up-to-date on their pertussis vaccinations. **In general, those who have received at least 1 pertussis vaccination have less severe outcomes than those who have never been vaccinated.** Over half of adults ≥19 years old had unknown vaccination status. See page 10 for links to vaccination schedules recommended by the Centers for Disease Control and Prevention (CDC).

Never vaccinated Under vaccinated Too young for vaccinations Up-to-date on vaccinations Unknown vaccination status



In August and the **previous 3 months**, cases who were **too young for vaccination** were more likely to visit the emergency department (ED) and require inpatient hospitalization. Infants <2 months old are too young to receive vaccinations against pertussis, which is why vaccination of other age groups is so important to help prevent infection in this highly vulnerable group.



**National activity**

The number of pertussis cases gradually increased since the 1980s, peaking in 2012 at levels not seen since the 1950s. Since 2012, the number of pertussis cases started gradually decreasing. Pertussis incidence has remained highest among infants <1 year old and lowest among adults ≥20 years old since the 1990s.

**Pertussis surveillance goals**

- Identify cases to limit transmission in settings with infants or others who may transmit pertussis to infants
- Identify and prevent outbreaks
- Identify contacts of cases and recommend appropriate prevention measures, including exclusion, antibiotic prophylaxis, and immunization, and to monitor the effectiveness of immunization programs and vaccines

To learn more about pertussis, please visit [www.floridahealth.gov/pertussis](http://www.floridahealth.gov/pertussis). For more information on the data sources used in Florida for pertussis surveillance, see page 10.

# Vaccine-Preventable Diseases Surveillance System Summary

## Case Data

- Current case data are preliminary and will change as new information is gathered. The most recent data available are displayed in this report.
- Pertussis, varicella, mumps, and measles are reportable diseases in Florida. Case information is documented by county health department (CHD) epidemiologists in Merlin, Florida's reportable disease surveillance system.
- Only Florida residents are included in case counts, but contact investigations are conducted for all exposed individuals.
  - Pertussis and varicella case counts include both confirmed and probable cases, while measles case counts include only confirmed cases.
- CHD epidemiologists also report outbreaks of pertussis, varicella, measles, and mumps into Merlin.
  - Household-associated cases are defined as  $\geq 2$  cases exposed within the same household.
  - Pertussis and mumps outbreaks are defined as  $\geq 2$  cases associated with a specific setting outside of a household.
  - Varicella outbreaks are defined as  $\geq 5$  cases associated with a specific setting outside of a household.
  - Measles outbreaks are defined as any person acquiring measles while in Florida.
- For more information about reportable diseases, please visit [www.Floridahealth.gov/diseasereporting](http://www.Floridahealth.gov/diseasereporting).
- For more information about Florida's guides to surveillance and investigation, including disease-specific surveillance case definitions, please visit [www.floridahealth.gov/gsi](http://www.floridahealth.gov/gsi).
- For the full article on a Minnesota outbreak of measles, please visit [www.cdc.gov/mmwr/volumes/66/wr/mm6627a1.htm](http://www.cdc.gov/mmwr/volumes/66/wr/mm6627a1.htm).

## Population Data

- Population data used to calculate incidence rates are from FLHealthCHARTS (Community Health Assessment Resource Tool Set).
- For more information about FLHealthCHARTS, please visit [www.flhealthcharts.com](http://www.flhealthcharts.com).

## Vaccination Data

- Vaccination data for identified cases are from Merlin, as documented by CHD epidemiologists.
- Vaccination status is determined using the Advisory Committee on Immunization Practices Recommended Immunization Schedule for Children and Adolescents Aged 18 Years or Younger, 2018.
- For more information about immunization schedules, please visit [www.cdc.gov/vaccines/schedules/index.html](http://www.cdc.gov/vaccines/schedules/index.html).
- Individuals are considered up-to-date on vaccinations if they have received the recommended number of doses of vaccine for a particular disease for their age at the time of their illness onset. Individuals are considered under-vaccinated if they have received at least one but not all doses of vaccine recommended for a particular disease for their age at the time of their illness onset.
- For a full text version of a new study on pertussis vaccination, please visit [www.cidid.org/publications-1/2018/3/29/the-impact-of-past-vaccination-coverage-and-immunity-on-pertussis-resurgence](http://www.cidid.org/publications-1/2018/3/29/the-impact-of-past-vaccination-coverage-and-immunity-on-pertussis-resurgence).